

REMARKS

Claims 26-31 are pending in the present application, claims 1-25 having been cancelled herein. The Office Action and cited references have been considered. Favorable reconsideration is respectfully requested.

Claims 21-25 were rejected under 35 U.S.C. §103 as being unpatentable over Brault et al (U.S. Patent No. 5,601,959) in view of Brooker et al (U.S. Patent No. 6,153,038). Claims 21-25 have been cancelled thus rendering this rejection moot. However, Applicants will discuss new claims 26-31 with view towards the cited prior art.

Claim 26 recites a process for applying a transferable image onto an almost partially roughened or irregular surface of a fixed wall of concrete or layer covered with plaster. The process comprises applying a transferable image onto a first surface of a transfer sheet by processing the transferable image by computer and printing the transferable image on the first surface with an electrostatic printer, applying a sealant coating directly over the applied transferable image on the first surface which sealant coating is able to bind the ink of the image, and drying the sealant coating so as to sandwich the transferable image between the sealant coating and the first surface. After drying, the sealant coating does not have adhesive tackiness or heat or

pressure activated adhesiveness. The process further comprises applying an adhesive binder onto the roughened or irregular surface of the wall, placing the sealant coating applied transfer sheet against the almost partially roughened or irregular surface of the wall with the first surface in a facing relationship with the adhesive binder on the wall, the sealant coating in dried form being able to protect the transferable image from any distortion and irregularity when mounted on the roughened or irregular surface of the wall, applying pressure in order to press the first surface of the placed transfer sheet against the wall, so as to thereby transfer the transferable image onto the wall; and removing the pressure-applied transfer sheet from the wall. This is not taught, disclosed or made obvious by the prior art of record.

In order to understand better the present invention, Applicant will first discuss the operating principle of conventional four-color printing machines also used in the method claimed in the Brigato patent application.

The electromechanical apparatus use electrostatic heads for the four-color printing, in different color shades and combinations, of images by means of essentially "subtractive" mixing of so-called fixed inks. The inks are referred to as such since they are present in a fixed number

(4) in four-color printing (C,M,Y,B) cyan blue, magenta, yellow and black.

These inks are semi-transparent and their superimposition creates a fixed range of colors, so as to provide images of an excellent quality as a result of subtractive mixing (each ink and its mixture draws light from the white of the paper). Each of these fixed inks occupies physically a piezoelectric head.

Printing of the images is normally performed by means of grids containing dots of variable size or concentration. For example, a grid containing 70 dots/cm is normally used and consequently each square centimeter of image is reproduced by a grid of 4,900 dots. Adjustment of the tones is performed using a stochastic screen which reproduces the tones by means of variation, within the unit of surface area considered, of the number of micro dots created or with a greater or smaller number of droplets (greater or lesser concentration) per unit of surface area.

The surface area of the support medium is therefore not acted on by a continuous film, but only by a more or less dense distribution of droplets, and extensive free areas between the above-mentioned droplets are still present.

In the case of the Brigato invention, the sealing coating layer is not an additional layer which therefore may

or may not be applied as in Brault, but is an essential layer which allows the inks to remain bonded together in their correct position during transfer onto the roughness of the wall surface. This layer must be able to, not so much adhere to the layer present on the wall, but bond together the inks so as to keep them fixed also in the case of roughness which is always present on the wall, differently from the special panels considered in Brault.

As mentioned, the inks distributed by means of electrostatic printers are not uniform, but are in the form of droplets which are stochastically distributed so as to provide all the color shades. This known distribution is confirmed by Figure 1 of the present application, in which the droplets are separate from each other and therefore may move away from each other during application to the rough wall if they are not firmly bonded together. For this purpose, it is necessary not so much to cover the inks with an additional layer of adhesive as occurs in Brault, which is able to bond better to the layer of adhesive applied onto the wall, but rather to fix the droplets elastically together.

This condition is best obtained by means of a sealant coating that is able to bind elastically the ink droplets and that is dried by means of an envisaged drying step which fixes the droplets of ink in position and allows,

during transfer onto the wall, the droplets to be kept fixed even in the presence of accentuated roughness which, to a certain degree, is always present on walls. In contrast, the use of a generic adhesive which is sticky at room temperature nevertheless allows the droplets to retain a certain freedom of movement, particularly in the presence of considerable roughness and following interaction with the other adhesive layer, which is also not dry and provided on the wall.

In accordance with the present invention, it is necessary that the sealant coating able to bind the ink droplets should remain dry and therefore that there should be no tackiness nor should it be heat or pressure activated, as in Brault (see column 5, lines 52-54). In fact, once dry, this layer has already completely performed its function of fixing the droplets so that they are able to adhere to the roughness of the wall without movement.

In contrast, Brault teaches, in column 6, lines 24-26, applying an additional layer of adhesive, which is therefore necessarily tacky or heat or pressure activated. Brault teaches not to treat the printed image, considering application of the coating (to prevent displacement of the colors) a drawback (see column 2, lines 53-63), thereby making it difficult to arrive at the present invention.

Moreover, neither Brault nor Brooker consider providing a sealant coating able to bind the ink droplets so that the colors do not move due to the imperfections of the wall.

Adhesive resins are effective for as long as the layer is smooth as in the panels envisaged by Brault, but are not effective on the wall since the latter necessarily is rough.

Applicant respectfully submit that the permanent receptor disclosed in Brault at column 5, lines 31-40, is a "sheeting or plates of metal..., brick wall", refers not to the receptor itself being a brick wall, but to a sheet of a plate which is suitable for covering a wall. Otherwise, as would be understood by one of ordinary skill, the Brault method would not work, because Brault does not take into account the movement of the ink drops result of from being deposited on a roughened surface such as a brick wall.

The Office Action admits that Brault does not disclose the adhesive applied onto the transferable image in the form of a sealant. As is now claimed, this step recites "applying a sealant coating directly over the applied transferable image on the first surface, which sealant coating is able to bind the ink of the image. The Examiner cites Brooker as allegedly teaching this missing step and suggesting

that Brooker discloses that sealants and adhesive laminants are functionally equivalent alternative expedients in the art for protecting images. The Office Action concludes that it would have been obvious to one having ordinary skill in the art to substitute a sealant for the adhesive applied onto the transferable image disclosed by Brault.

In Brooker, the sealant is applied when all of the images have been transferred to and dried on the target object. Brooker teaches that, as an alternative, rather than applying sealant to the target object after the images have been applied, one can use an adhesive laminate that is clear and protects the image. Thus, the adhesive laminate that is disclosed in Brooker is one that protects the image after it is transferred to the target object. However, neither Brooker nor Brault discloses a step of applying a sealant coating directly over the applied transferable image on the first surface of a transfer sheet (i.e., before transfer of the image to the target object), which is able to bind the ink of the image.

In Brault, an adhesive layer 22 is applied to the permanent receptor prior to the transfer of the image onto the permanent receptor. Brault discloses that an additional adhesive layer may also be applied on the image dielectric surface prior to contacting the surface with the adhesive

coated substrate. Thus, one of ordinary skill in the art would understand that the second applied adhesive layer merely increases the adhesiveness between the image dielectric surface and the permanent receptor. There is not disclosure in Brault of applying a sealant coating directly over the applied transferable image on the first surface of the transfer sheet after printing the transferable image on the first surface, which sealant coating is able to bind the ink of the image.

Likewise, neither reference discloses drying the sealant coating so as to sandwich the transferable image between the sealant coating and the first surface, after drying the sealant coating not having any adhesive tackiness or heat or pressure activated adhesiveness.

Thus, even if it can be said, for a sake of argument only, that the combination would have been obvious, the combination would not yield the present claimed invention. For at least these reasons, Applicant respectfully submits that claim 26 is patentable over the prior art of record whether taken alone or in combination as proposed in the Office Action.

Claims 27-31 depend from and include the recitations of claim 26. Applicant submits that claims 27-31 are

patentable in and of themselves and for the reasons discussed above with respect to claim 26.

In view of the above amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections of record. Applicant submits that the application is in condition for allowance and early notice to this effect is most earnestly solicited.

If the Examiner has any questions he is invited to contact the undersigned at 202-628-5197.

Respectfully submitted,

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